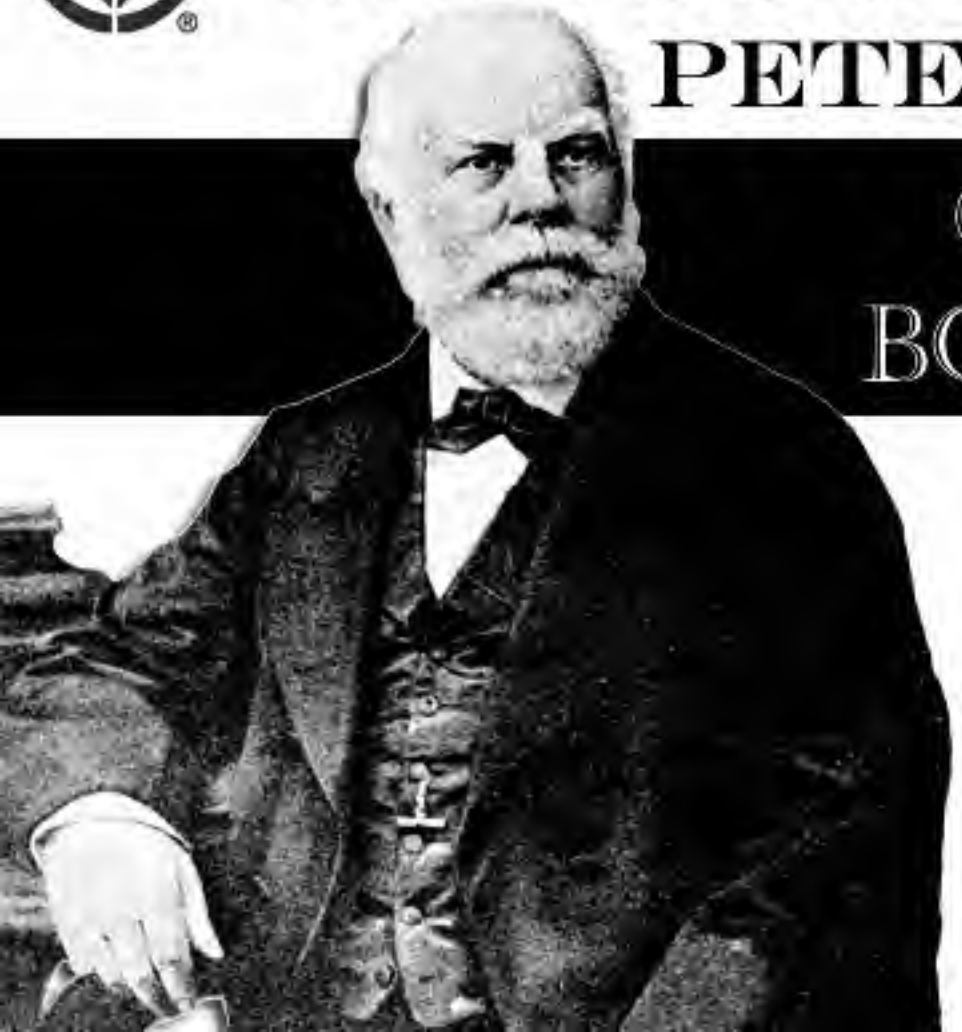
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George Engelmann Botanical Notebooks

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Ophiorrhiza

Cereus Johnsonii ? Nov sp ((Parry

1388

Flower (including young fruit) 2 1/2 inches in length 2 1/2 inches broad. — Sepals imbricated. outer (lower) small ovate, orbicular somewhat in alternate rows with scarious margins. inner petaloid sepals 1 1/2 inches in length. Color light pink.

Stamens half the length of the inner sepals nearly as long as the cylindric style: Style tipped with 9 nine radiate stigmata. curving inwards

Axis simple 6 inches high. 3 inches in diameter slightly tapering at base and summit: rows of spines 21. inclined to spiral. ribs broad intervals shalow. Spines 4 central of nearly equal length upper and lower slightly longer. 1 — 1 1/2 inches long: radiate spines 10 - 1/2 to 3/4 inches long Whole plant of a pale glaucous color closely set with interlocking spines of a light brown a pinkish color. flowers crowning the summit

Hab - St George Utah

Ft. Kt garden June 14th - 1870

Coll. J. T. Johnson 1870

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Munich Nov 1857

Ech. Karwinskii seems very near; if not only a variety of Ech. Pfeifferi — is oval-cylindrical, 12-inches high; 17 ribs, more green areolae ~~white~~ more distant, spines yellow; 8 radial, 1 central stouter than the rest; ribs less sharp or at least less compressed than in the E. Pfeifferi.

1389

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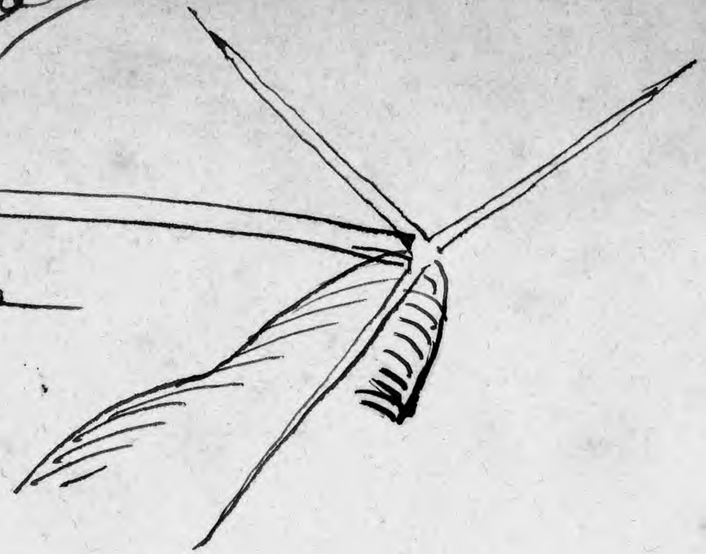
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Notes at Brussels, April March 1857

Echinocactus Coptothele

4 spines; the lowest reflexed, and much the longest



1330

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Munich Nov 1857

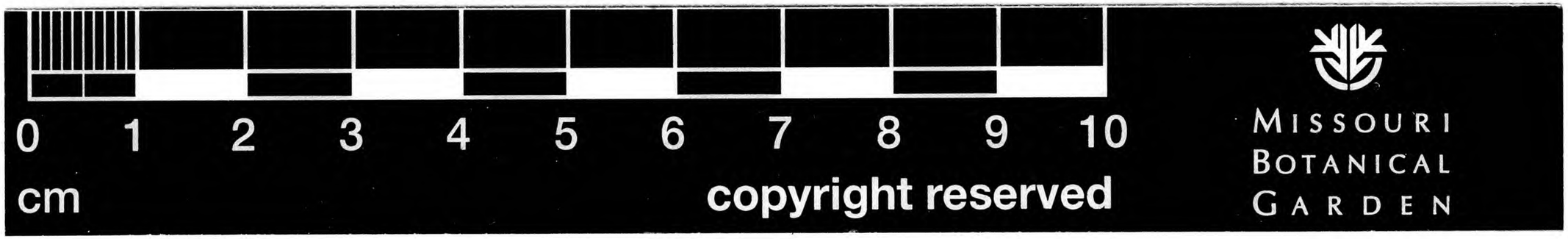
1391

I find only a few remnants of the splendid old Collection of Cactaceae, sent by Karwinsk. etc and described by Zuccarini & Martius.

Echinocactus leucacanthus is 4 inches high, glaucous with white spines ½ – ¾ inch long, ribs obtuse. resembles somewhat those of E. horizonthalon

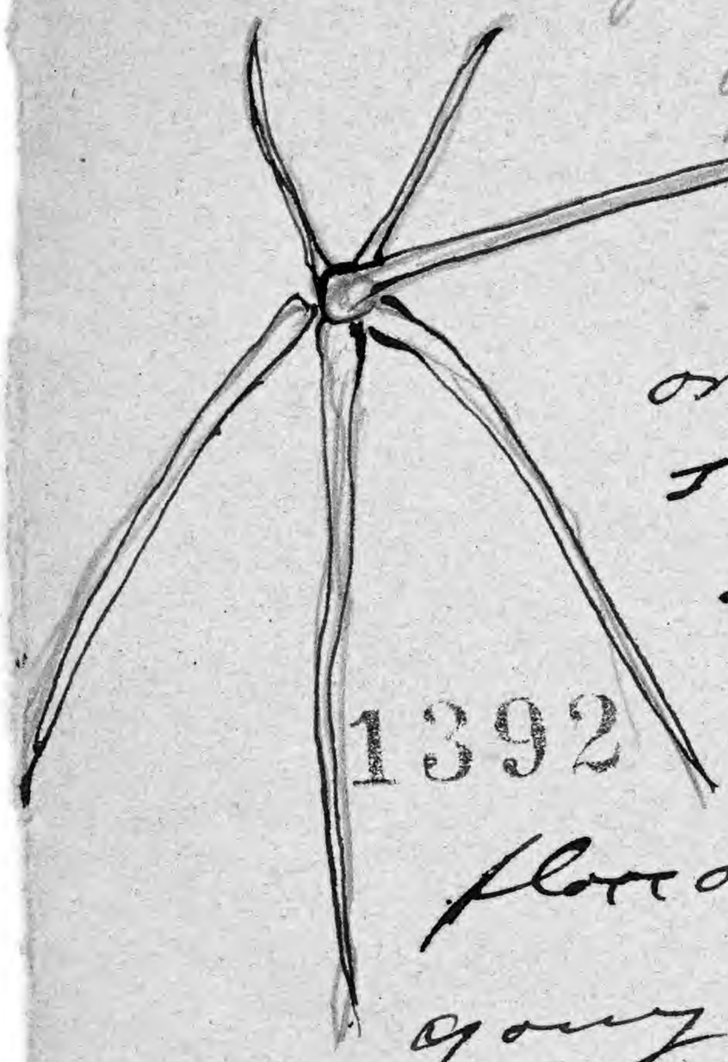
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Echinocactus Cophothele

Hort Cels, Paris March 18 1869



old spines exfoliate or rather the cells of the surface become separated so as to give rise spikes the appearance of a woolly or rather floccose surface.

young spikes are perfectly smooth and red-brown, mostly 1 central and 5 radial ones, lowest longest old spikes which are nearly

fruit (according to Dr Weber) similar to that of Ech. Grusonii, yellowish, not fleshy, globose, c. m. diameter; much like the fruit of E. Leti Spiders, but drier, with persistent flowers

flowers pale sulphur yellow

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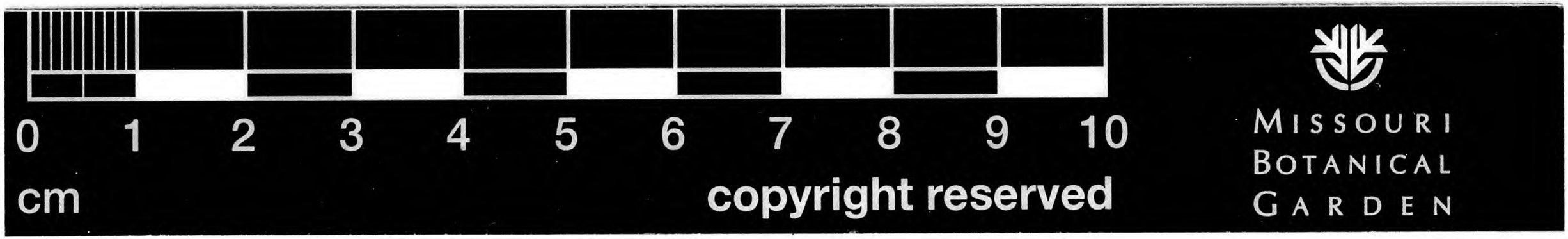
1393 Hort Cels. Paris 18/3 69

Sch. Trautvetter an original specimen

= Corydalis, but spurs weak,
not hooked, scarcely curved,
plant oval, 20 inches high, 8-10 stamen.

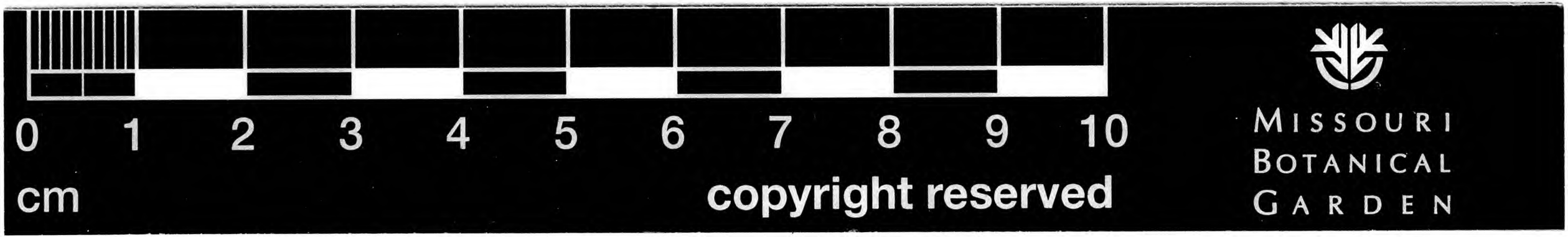


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E. Longehamatus Gal. Ost May. 4632 Gould

1394



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Cambridge Aug 14 & 15
1882

Echeveria
nuw Conzhamates

1395



about 30 conic sepals in many
in $\frac{8}{13}$ orbs
about about 30, inner large ones 13
sepals of the red, with deeper midrib
petals 21 rose, acuminate, or
acuned.

replum conic yellow, ovoid obl ½ line deep
placenta part of tube about 7 lines, stout
short; style longer exsert (with stigma) 18 lines
exsert, shorter the petals (= flower 3 inches
long) stigma white; ♀ 13-15 spreading

This was written in evening Aug 14th 1882. Cambridge
plant from Monterey, Palmer. but now in morning
of 15th a fresh flower opened, deep yellow!
It is similar and closely allied to Echeveria
longiflora. plant globose 5 inches dia
ribs sharp, undulated. The central
curved or hooked spine, 1/4-1/2 in. long
. about 5 and short ones radiating below;
1/2-3/4 inch, 2 or 4 lateral white ones on

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each side, above 3—8 slender ridges
1–1½ in long which may be considered upper ventral ones,
or upper radial ones.

The plant is closely allied to E. Coryphantha
spines and colour of flowers rather different.

Dry 17 ft deep yellow in morning, centres
petals & inner stamens dark rose and
pretty rose coloured; in petals dirty reddish yellow
plants 5 inches diam — 12 ribs

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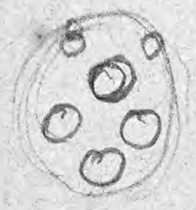
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At Hanke's, Bay July 10th 1869

Echinocactus mutabilis

3 inches diameter, ovate-globose, 15 deep ribs strongly tuberculate

1396



6 black spines rather stout, especially the 4 lower ones, the upper one of which is directed upwards — Stouter Spines 1 inch long, black

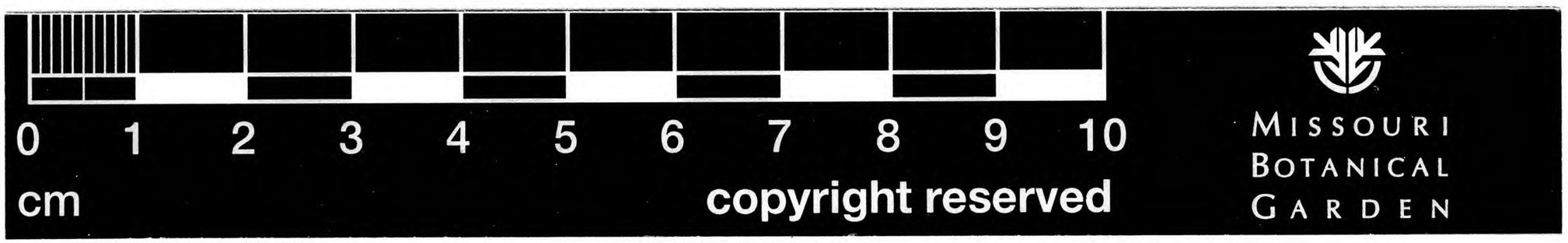


Tubercle under the areola remarkably prominent, apparently growing yet, often deeply long (a year or more) formed, and bursting the epidermis



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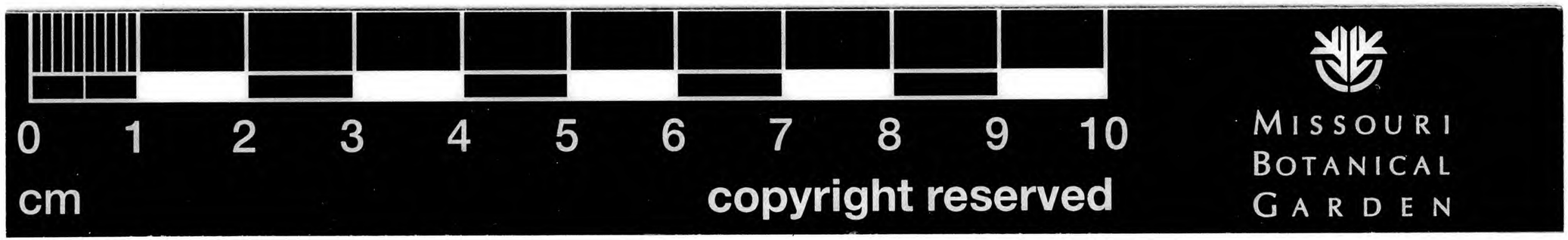
Echinocereus macrodiscus Mart.

Hort Martii
Aug 1869

Act.nn Nat Cur. 16. t. 26. (pars)

Commun. Keerl 1830. Cult. Tlalpuja hua. Mex

flowers and bundles of spines, spines annulate,
straight, especially the stout central ones
ribs very numerous, tubercle, petal, narrow,
irregularly lacerate, bristle-pointed -
whole flower very much like that of
1897 E. conjugatus - see figure & descript. in
The text says that it was collected by Karwinski
in Cabal, by Keerl, but Keerl collected only at Oaxaca

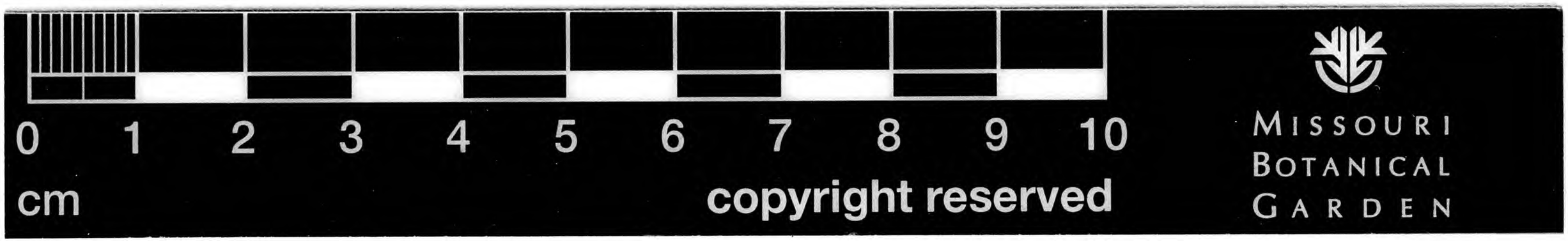


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Echinocactus macrodiscus from Queretaro
seen spines at Orbea, which resemble much my
E. Parryi.

1398 Paris 1869 March



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Koopmicher Steppe 93

337

Echinocactus myriostigma at H Hasselofs

1399 Berlin June 10th 1868

Here and th Roselgers numerous specimens raised from seed, always 5 angled and depressed, and marked with the characteristic white dots which consist of small bunches of hair; but the ribs are either narrow, much compressed, with a sharp edge, or thick with a rather obtuse'ish edge.

E. myriostigma, Coptogonus (always 5-angled ornatus, capricornis have all this peculiarity ~~Such~~ that when old they produce buds (when transversely cut) from the woody ring near the centre (apparently from the centre) or rather the Cambium, just outside of it; in young plants the buds come as almost always in other species, from the edge of the ribs.

elegantly marked

Flower 1 3/4 inches long with numerous lance subulate black & white
linear- black & sepals over ovary and short bumped-shaped tube, woolly in the axils, and with pale yellow petals.

Sepals on ovary 40-50 short, lin long, on tube 60-75 1/2 - 6 lin long, upper ones black only on the upper part, or tipped with black, yellow with red blade all linear subulate — The black tips are fringed with black cilia.

About 12 stamens most sepals, almost as long as petals



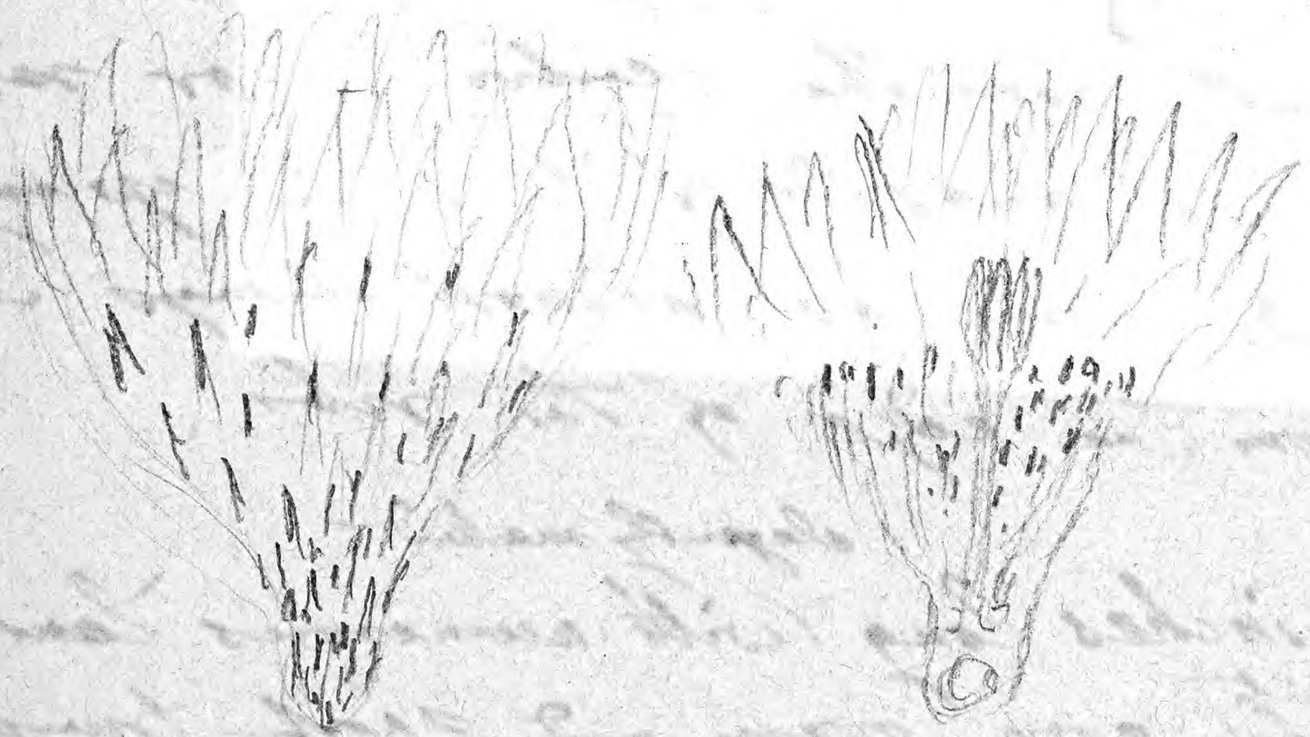
but all with Black tips

Petals about 5/8 in 3 series / lance linear, acuminate somewhat denticulate, pale straw yellow.

Naked spare ÷ Tube very small, neither conspicuously striate part 5–6 lin long, rapidly widening stamens short

Stigmas longer the stamens stigmata 6 lobed obtuse erect, pale yellow

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Cambridge Aug 17 1882

Echinocactus myriostigma

flower 2 inches long, 3 inches wide open
petals 50-60 sulphur yellow oblanceolate
bristle pointed 1½ in. long.
7 bristle pointed stigmas spreading, scarcely
exceeding the stamens
many subulate black scales on ovary, &
rather dense wool

scales of tube numerous, with a long black wooly tip
nectarian cavity only abt ½ in deep
stamints beside funnel, lapped part of tube 6-7 lines
deep.

1400

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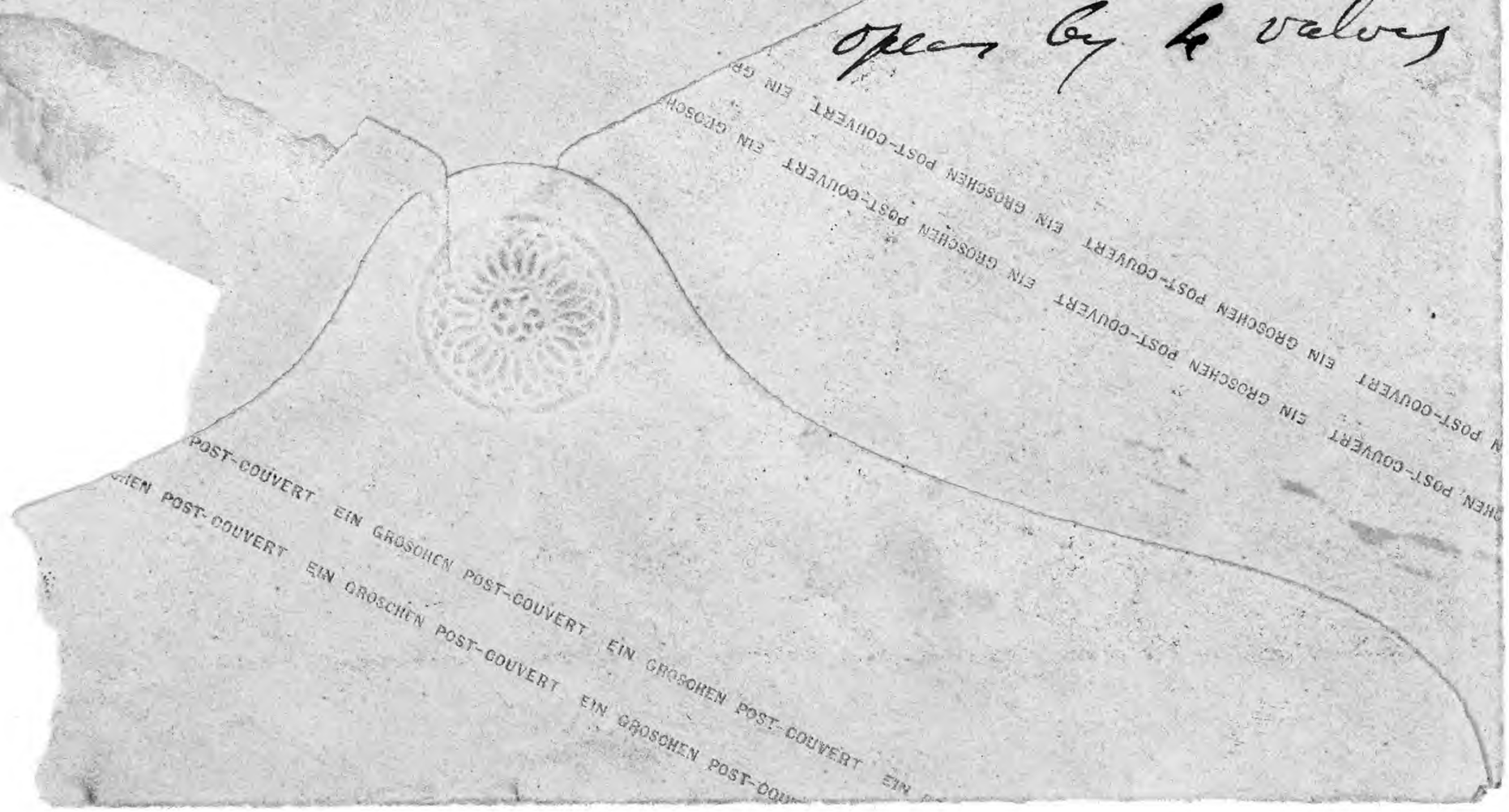
1401

Mirbelianus

Echinocereus coccineus fit Gurdiana 74

fruit as large as a cherry

Opens by 4 valves


POST-COUVERT EIN GROSCHEN POST-COUVERT EIN GROSCHEN POST-COUVERT EIN GROSCHEN

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Hort Hamburg, Paris 2/4 69

Echinocactus Odieri, with numerous very small spines, similar to the E. Jussieui, which however has strong spines.

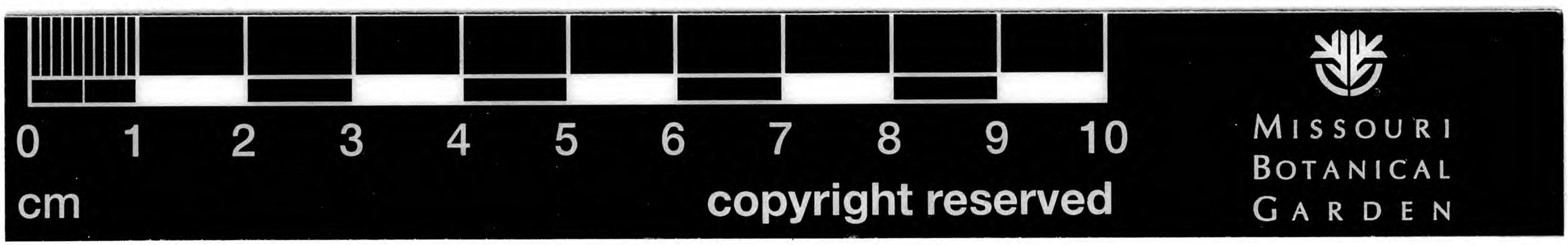
Bott globose, 2—4 inches diam.

E. Odieri resembles somewhat a Pilocyphos tuberculated, with axial mamillae.

1402

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~~hamatus~~ hamulatus

Echinocactus ~~Gurkiferi~~ Gurkianus n sp

Pleasant Valley near Salt Lake Desert

Henry Eaglam May 9th 1859

Plantes tuberculatis, costis 13 subobliquis, sinuosis
areolis orbiculatis; aculeis brevibus ~~parvis~~, angulatis
radialibus adultis
reflexis, dorsum deorsum spectantibus, 5-7
radialibus inferioribus brevioribus, 1-2 superioribus
robustioribus, ~~subrecte aculeo~~ rectis, centralibus
robustiore longiore,
~~subulato~~ hamatis (?) aculeo centrali deflexo
hamato (rarius) saepe deficiente

A very peculiar species; the largest sp.
seen (no trace of flowers or fruit) ± 2
inches high and 1 inch diam.; ~~corpus~~ corpus
tuberculis compressis in 13 conspicuous ribs,
5-6 lines distant from one another; with white tomentum
and spines 1-4 lines long; with four areolas
5-6 in number, with the uppermost a little longer
and stouter, then 1 or usually 2 uppermost
become still stouter, and the areolas increase to 10.
one or more of the uppermost become hooked,
at last here & there a central spine
appears, and 5-6 l. long, stout & strongly
hooked. All the spines are thickly covered
with tomentum, only the blackish point being
denuded, but with age this entirely
disappears. — Another specimen has from
8-12 radial and no central spine. The
radial spines are more slender & longer
than ~~the central spine~~ the ~~spines~~ dorsum directed
and the spines are less woolly.

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1403

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Dec 1859

spines from the Herrera figured



Pleasant Valley near Salt Lake desert

spines from the dense & smaller specimen

5-6 in number, with the uppermost a little longer and stouter, than 1 or usually 2 uppermost become still stouter, and the number increases to 10. one or more of the uppermost become hooked, at last here & there a central spine appears, and 5-6 l. by, stouter & strongly hooked.. all the spines are thickly covered with tomentum, only the blackish point being denuded, but with age this entirely disappears.— Another specimen has from 8-12 radial and no central spine. The radial spines are more slender & longer than in the ~~last~~ other specimen described and the spines are less woolly.

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1404

ARTHUR LEITCH,

APOTHECARY AND CHEMIST,

Sixth and Market streets, St. Louis, Mo.

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0260

Echinocactus fobrispinus (spec. nov.): parvus turbinatus, costis 13 subobliquis compressis interruptis tuberculatis, areolis obiculatis, aculeis radialibus 5-8 albidis brevibus, apice adustis velutinis demum nudatis, centralibus 1-2 robustioribus rectis, ceteris setaceis, omnibus brevibus, superioribus 1-2 robustioribus rectis, cuneatis s. hamatis; aculeo centrali nullo deficiente sed rigido robustiore longiore arcuato saepe hamato flore —; fructu —.

Basalt Valley near the Salt Lake Desert (where only 2 specimens were found by me, without flowers or fruit, but showing the small superficial areolae (the vestiges of the characters of the genus) and thus proving it to be Mam. fuscata Engelm. & Bigelow Cact. Whipp. Rep. Explor. Bot. p. 28. t. 1. var. spinosior Engelm. & Bigelow Cact. Whipp. Rep. Explor. Bot. p. 45.) globosus; costis 13 compressis interruptis, aculeis radialibus 9-11 insequalibus saepe obscuris, albis, nitidis, 2 superioribus saepe longioribus

8

Calyx 5, ~~not ruptured~~ ruptured, ~~persistent~~ persistent,
petals 4, ~~rarely~~ elongate ~~complete~~ flexuous,
3 stigmas papillo broad obscure ~~lacerate~~
ovules ~~two~~ solitary ~~lacerate~~, ~~flowers~~ terminal

Desert Valley west of Camp Floyd: ~~South~~
in July & October, with flowers & fruit, ~~XXX~~ seeds
were discovered among the specimens which are apparently
like the seeds described & figured in ~~Capt~~ Whipple's
Report; ~~the abundance~~ the tubers of the ~~fi~~
active seedroot are very minute & distant from one
another, each ~~composing the center of~~ an angular
form & central protuberance on ~~an angular~~ the other side
flat surface of an angular cell of 2 or 3 times the
diameter of the tubers itself; The embryo is ~~curved~~
about 3/4 around a rather large albumen. — F. E. W.
Was originally found on the Little Colorado by Dr Engelmann
and later on the same stream by Dr Newberry;
Not variety, was ~~stated~~ with (in Desert Valley, by
more the 5 degrees farther north

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(Stem ~~globose~~ 2 inches — 4 diameter, radical spikes
1/2 — 1 1/2 inches long, ~~radical~~ on 1/2 — 2 inches —
length; seeds see above)

From the Colorado ~~original~~ from from the Colorado ~~mainly~~
differing from the Utah plant by the absence of the flattened upper radical spikes.

flowers numerous, ovaries ~~squamous~~ oblong;
numerous ~~& crowded~~, sepals, tube oblong ~~obcordate~~
~~obtuse~~ membranous integrous, ~~unequal~~,
petals oblong ~~equal~~ equaling 6-7 broad ~~exclusive~~
~~exposed~~ globose ~~compact~~, base ovate
~~obtuse~~ ~~obtuse~~

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Echinocactus
~~Hamiltonii~~ papyracanthus Engelm Trans Ac. St Louis
Hamiltonii —— Engl 2. p. 197
A. Fendl. p. 49
Synops Cact p. 264

May 8 1882

1406





At F. Bourdieu leg. San Felipe
R. Nov.

Turbinate, about 1 inch diam
tubercles short, in 8/13 order, with white
shining flattened flexible and
flexuous or curved spines
7–9 radial ones smaller 2–4
lines long, one lowest one larger
broader; 3 central ones, the
lower of such broadest and longest
about 1 inch long 1/2 – 3/4 line wide,
the two upper ones smaller, narrower.
Flowers from the nearest tubercles;
floral areola woolly, close above the spine-bearing
areola; about a single white membranous
entire (not fringed) scale on ovary; 4 or 5
lower scales of tube similar, gradually larger
upper scales oblong, obtuse brownish green, with white
margins 13–15 in number. petals about 8
smaller and narrower than inner scales, narrowly

lanceolate, acute, 3 rigous 5-6 foliiporous
Eight green, four exceeding the stamens.

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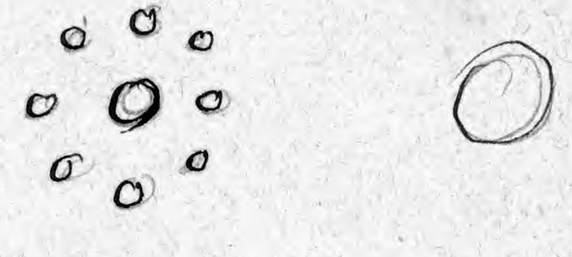
Ech. Pfeiffer: Hb Berol Jun 1869 globose, about a foot — diaeta; ribs 12–13–14 large, wide, sharp; areolae almost contiguous



usually 6 radial ribs, lower ones a little

1407

Ech. Pfeiffer: is slightly Hort Dyck Aug 1857
similar, 11–12 ribs tubercles obtuse
up. 6 inches high; — areolae
oblong, 8 rad 1 cent spines
yellowish, slightly curved.



Ech. Schidae is very similar to Pfeiffer
spines only more brown; — 13 ribs



E. gibbosa with yellow flowers Hort Dyck Aug 1857
11. ribs is the same (I have dried flowers.)

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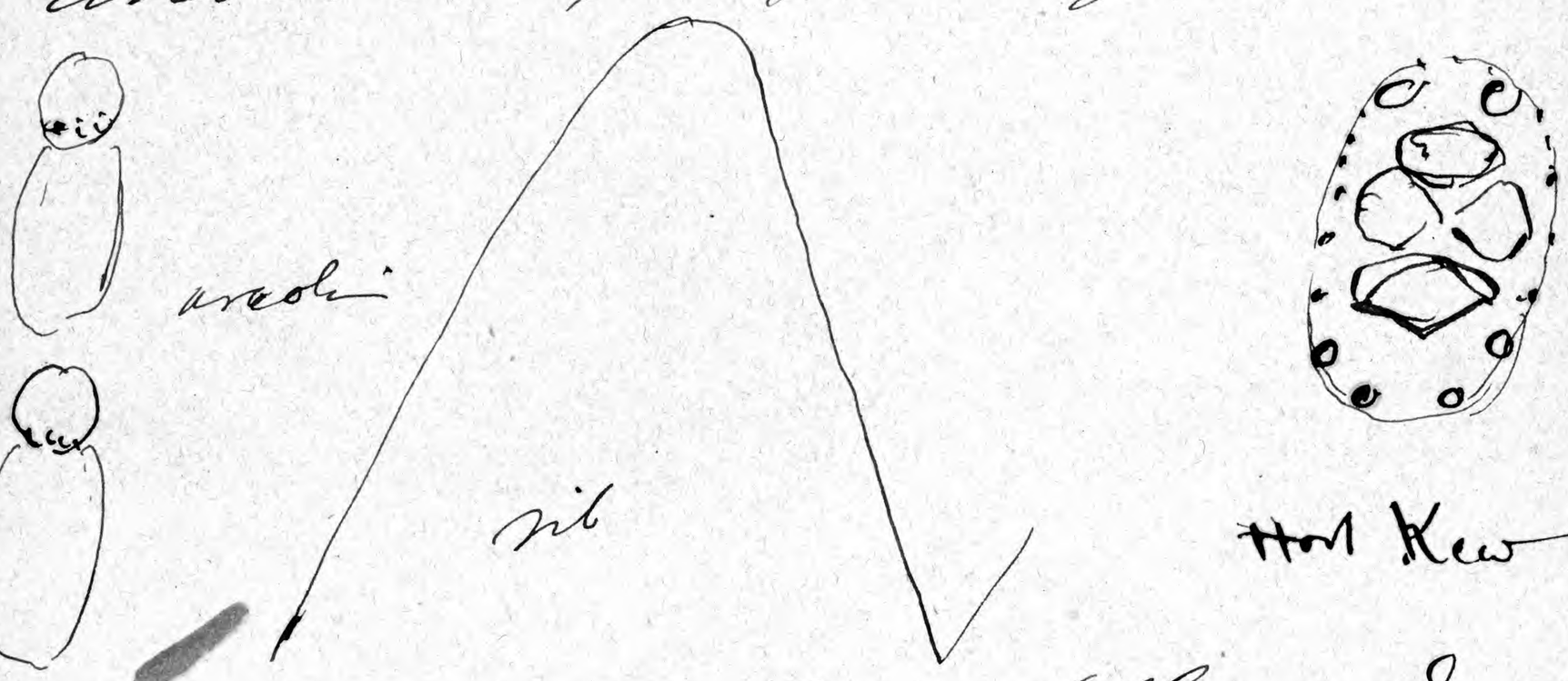
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Ech. pilosus

E. pilosus Gleeotti (Gard. Chron. 1849 p. 148

Ech. Steinesii is the same as E. pilifera Lem.

A specimen is 235 ft in weight, 5 feet high, 18–20" diameter, 18–21 ribs (there are 5 or 6 large plants) areolae oval, very closely approximat



Hort Kew Aug. 1857.

very spines beautifully red, oldest strongly annulated.

Baker says (fide Labouret p. 187) that the largest sp. of E Steinesii had 44 ribs and weight 1000 pds

1408

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(= Stuckert)

Echinopsis [illegible] by Dr

Rosetyer in abundance

in the Sierra de Catorce

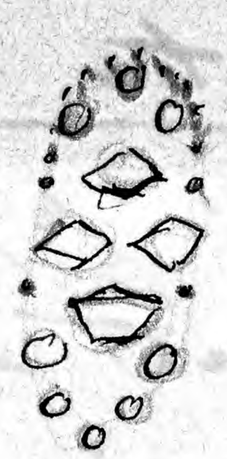
columns 5–9 feet high –

many together (from the same root?)

yellow flowers; very spines with 13

ribs (5 inches high) older ones 21–27 or

more ribs –



Areoles elongated, antigunous floral

areola; 4 interior smaller spines;

2 lower one stoutest and longest; 5 lower

radial ones, and on the small spec-

imen 1–3 upper ones; on the sides of

areola a few, on the upper margin

a great many, curly hair like

spikes, shorter than! – Spine annulet

1409

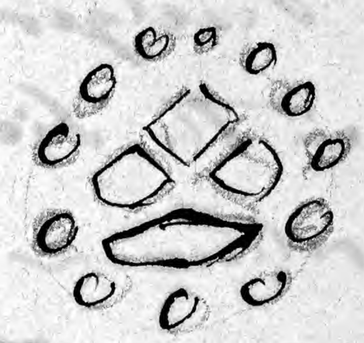
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MISSOURI BOTANICAL GARDEN

Notes Made at de Pezelgen's. Berlin March 1857

Echinocactus robustus Pozelg. Growth upright

4–5 inches high, ovate, 12 ribs, compressed, sinuate tuberculate —



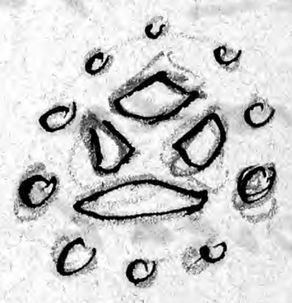


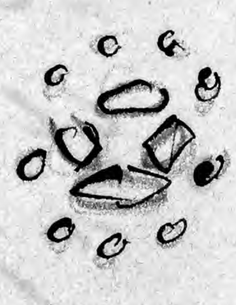
4 Central spines, lower 2–2½ inches long flat or channeled somewhat flat hooked, otten angular, shorter 3 lower radial spines hooked! 5 three over above the rest one 4 on the sides; lateral radial spines slanted, all, especially the upper ones angular —

Floral areola short, contiguous to the apical spine.

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Ech. sinuatus Growth upright





13 ribs, spiral, compressed, tuberculate; contiguous floral areola; 4 central spines flattened angular, especially the lowest, hooked one, 8–9 radial spines angular. —

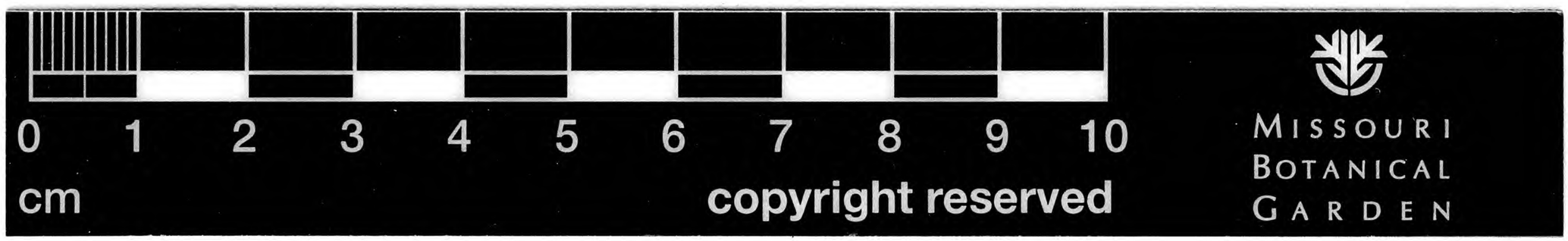
Ech. setispinus has been known long under the name E. Marsdianus

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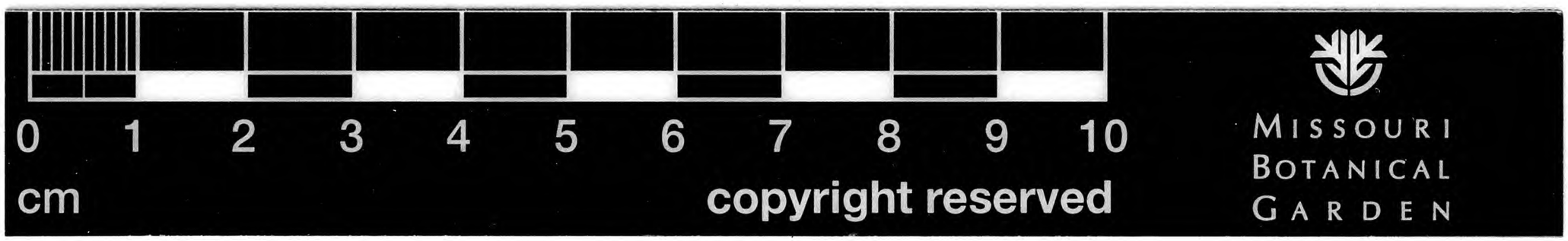
1410

Kew Aug. 23 1869

"Echinocactus Ottonis Forst" 10 inches diam.
18 inches high, 19 sharp ribs
crowded areolæ
yellow areolar spines, 3/4 - 1 1/2 inches long,
central one a little stouter, when old all
getting dark -
flowers small yellowish - Whole plant similar
to Pfeiffer? flowers not quite central.



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al Hanke's, Bay July 10 1869

Chin. pinnatotele, spirally arranged tuberculy
with 3 spines.

Fl. centre, sepals fringed, lower one transverse
and auricled.

1411

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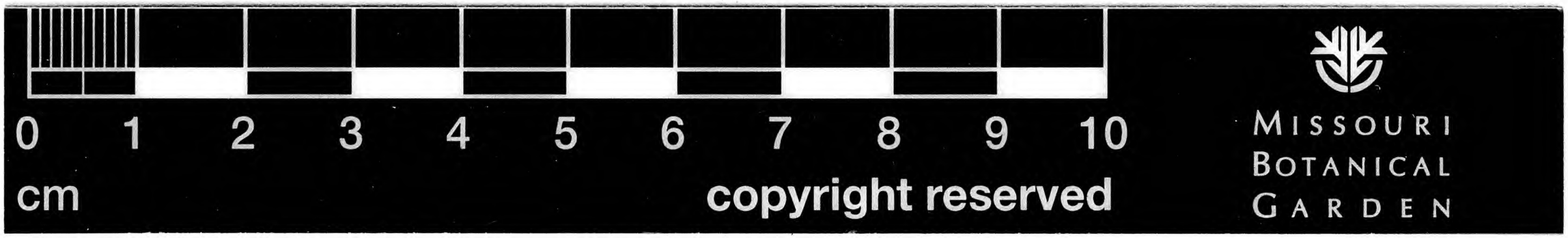
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Hort Guedency, Visiet 5/4 69

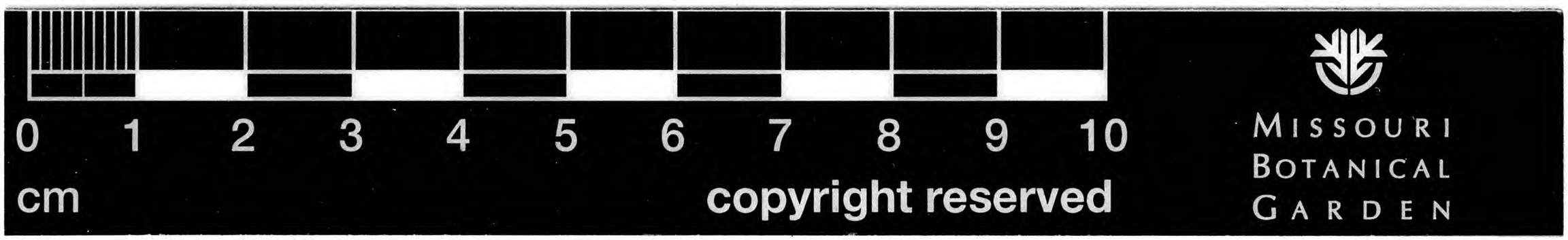
Echinocactus pumilus is a very small plant, bearing Brown wool, inclosing extremely small flowers, not sized of a pea.

1412

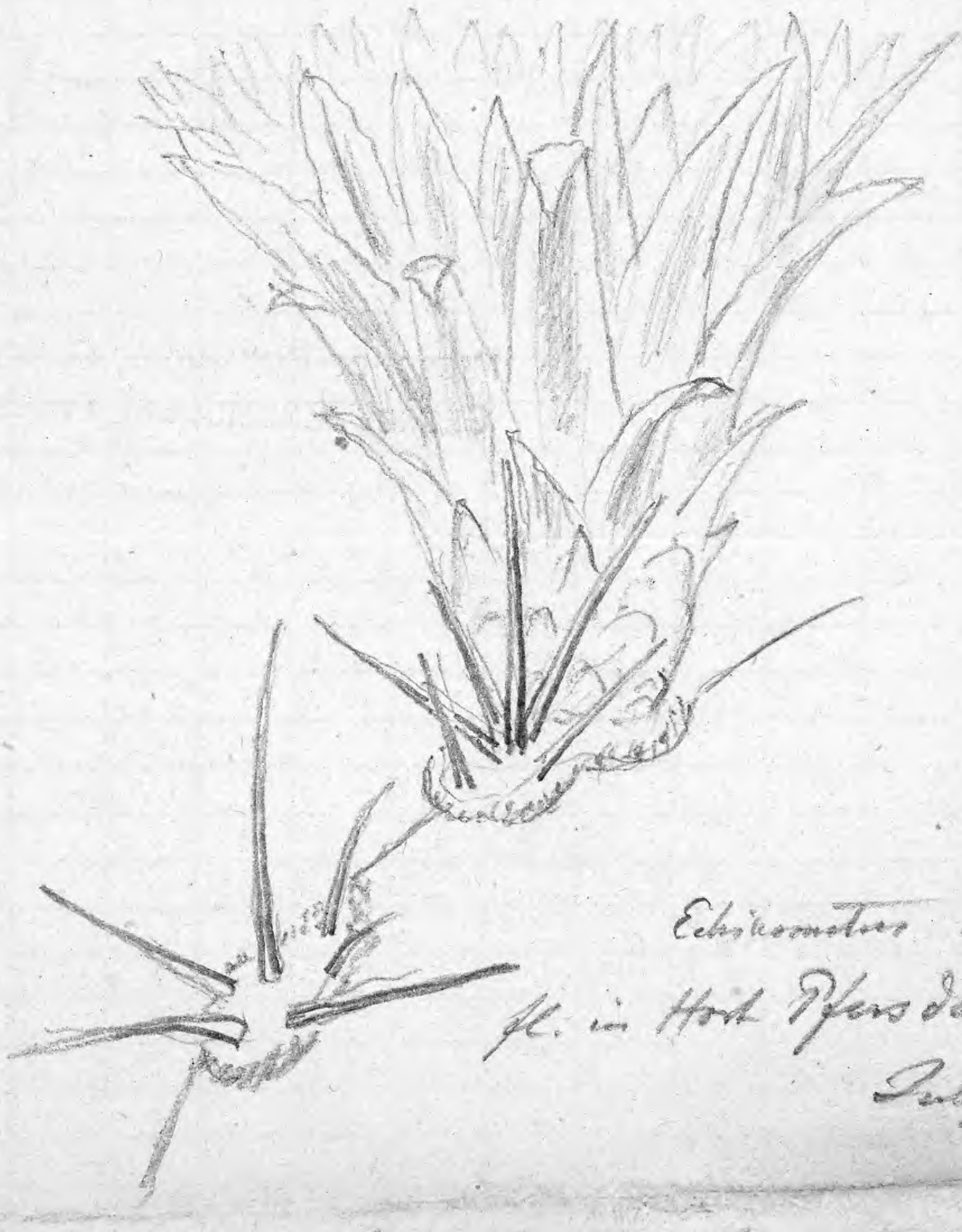
Echinocactus Cumingii ? Flowers much like Echinocactus (Malacocarpus)



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Heed 347-350



1413

Echinomastus Pattersonii Sulm
Fl. in Hort Pfersdorff
July 1872

sketch of the A Weber coloured figure
(Dr Chanvet del ad nat del)

Fl. externally brown red, especially
along the midribs, margins pale
petals erect not dilated, pale yellow

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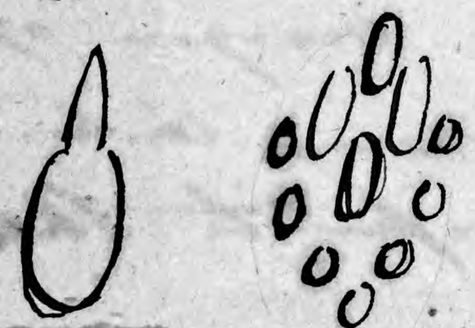
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No. 0001

258 Echinocactus (E. Ottonis ?) 5 inch high 7 in diamtr 1414

13 ~~British~~ ribs as large as ~~the last~~; somewhat depressed.

areolae oval distant 1½–2 inches; broad at base, triangular in section;



areola with 4 central spines on upper part of areola laterally compressed, straight or slightly curved, (all spines annulated.

7 exterior spines laterally and below.

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Notes on a few Cactaceae
made at Fr. Scheer's, Northfleet,
Kent, Aug 22 1857

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(most of the notes I made on the margin of
Scheer's Cactaceae in Seemann's Botany
of the Herald) The numbers refer to their
publication

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